plane
GRUMMAN
news

Data Systems bids to hike sales by offering new business services

Lease signing. Rear Adm. Tom Walker, Commander of the Naval Air Systems Command, takes pen in hand, as President Lew Evans watches, to sign a five-year lease with Grumman for the Calverton facility. The lease includes options for two more five-year agreements. Grumman uses the facility for final assembly and flight testing. (Photo by Nat Scherer)

As Grumman Data Systems passed the half-year mark July 1, its selling effort was being directed toward such diverse areas as payrolls and status reports, inventories, taxes, and systems engineering—for forward-looking businesses, organizations, and institutions. GDS is Grumman Corporation's newest subsidiary.

"We've had a lot of experience with Grumman's complex requirements, and now we're offering to business leaders the efficiency and economy that will help them stay competitive," says Pete Viemeister, President of GDS. He pointed out that GDS continues to serve Grumman Aerospace in all computer functions (for payroll, engineering, flight acceptance, and many others), and is now increasing its outside commercial work.

Bob Nafis, Vice President of Corporate Development, points out that GDS services fall into four categories. The first:

• **Automated Business Systems (ABS).** This will be available to small businesses in the metropolitan area by mid-July. It is a general business systems package, performing such functions as accounts receivable, payroll, inventory, accounts payable, and financial statements. The business man can time-share (via an inexpensive remote terminal at his own location) the GDS computer facility, one of the largest in the Northeast. Payroll can be a stand-alone package if desired.

Jakobson's Shipyard was the first customer to sign for payroll service.

• **Financial Systems.** This service includes software, designed for financial institutions, as, for example, credit union transactions and status reports, by an on-line (immediate read-out) system. Systems packages are being developed for commercial and savings banks, savings and loan associations, and brokerage houses.

The Bethpage Aircraft Federal Credit Union, with 28,000 members, has contracted for an on-line system to replace the present batch processing operation that has been supplied by another firm, and the Suffolk County Teachers Credit Union, with 12,000 members, is another customer in this field. Project manager is Matt Sokolove.

• **Computer Service.** Systems engineering services on a complete range of IBM 360 computers are offered very competitively for aerospace and commercial users. Services include keypunching and data preparation and handling, data acquisition, analog and digital conversion, data analysis, and output reporting services.

GDS now has a number of customers for its Call Data time-sharing services. One unusual contract is with Computer Searching Service Corporation for a case search service for attorneys. Instead of having to search through a law library for cases of a specific nature, the attorney can get his information in a twinkling by using a remote computer terminal in his office. All searches have already been made and filed; he just plugs in and gets pertinent case citations. Many ramifications are seen in this kind of service by Herb Goldstein, marketing representative, and Al Oerter, project manager.

GDS has won its first job in the school market from Massapequa Public Schools for preparing attendance reports for 17,000 students.

• **Integrated Systems.** This is where GDS sees a tremendous sales potential among hospitals, medical insurance companies, federal agencies, educational institutions. Its services apply to many types of analysis, advanced concepts, design consultation, and facility management.

The New York Telephone Company contracted with GDS for a study of central office operations relating to the burgeoning telephone wire distribution problems in the metropolitan area. It has now been completed and GDS has advanced a proposal for design of a

(Continued on page 5)

NASA contracts

Contracts totaling more than $8 million awarded to Grumman were announced last weekend by the National Aeronautics and Space Administration. For the Lunar Module, it was a supplementary agreement for $3.2 million; for the Orbiting Astronomical Observatory, a contract modification for $5.3 million.

"The (LM) agreement," NASA said, "formally incorporated into the Grumman contract 18 changes previously authorized by NASA for modification to the contractors' procedures of continuing vehicle readiness reviews, vibrational testing, changes to the rendezvous radar, quality assurance and reliabilty procedures, and for updating a descent engine." The modification, valued at "about $3,248,000," brings the total estimated value of the Grumman contract since January 1963 to approximately $1,673,119,200.

Other negotiations on Lunar Module contracts continue.

NASA, announcing issuance of a contract modification for OAO, placed the estimated cost-plus-fixed-fee contract modification for a one-year period at $5,283,000. That is for the initial period of July 1, 1970, to June 30, 1971.

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Vol. 29, No. 13, Bethpage, N. Y., July 10, 1970

Diane Valentine—her pursuit of hidden intruders helps insure safety of astronauts

For most people, sorting out the "good guys" from the "bad guys" these days is becoming an almost impossible task. For Diane Valentine, though, it has become a way of life. The "bad guys" she pursues, however, will never be found on anybody's most wanted list. Diane is a microbiologist working in the Bio-Technology Lab in Plant 31, and the intruders she hunts are microscopic bacteria that could be a source of danger to the crew of a Mars-bound spacecraft or even to a high-flying jet.

Diane's interest in science was primed at Midwood High in Brooklyn, but it wasn't until she reached Syracuse University that she became "fascinated" by bacteriology. A study of microscopic organisms might seem an unlikely love affair for a young college girl, but this led her to further courses in biology, genetics, physiology, chemistry, and physics. Then, in 1957, armed with a degree in bacteriology and a still somewhat "nebulous" idea as to where she would direct her energies, Diane set out on her career.

Last July Diane came to Grumman following stints at Pfizer (where she helped develop antibiotics), and at Republic and IBM Space Systems Center (where she investigated bacteriological growth in close spacecraft environments).

Slim and dark haired and with a quick smile always lingering near the surface, Diane's disarming candor and quick wit soon put to rout any misconceptions about lady scientists. "People have this stereotype idea of a lady scientist—you know, cold and austere. I don't think that's me."

Another misconception that existed in some quarters when the space program was just getting started was the fear that in a closed environment such as a spacecraft, where there would be no interaction with the world outside, bacteria would eventually take over. With a hint of amusement in her dark eyes, she recalled that "they thought people would just get dirtier and dirtier, and the bacteria would multiply and multiply until everything just melted away in a green slime."

Research and experiments have proved otherwise.

Photos by Nat Scherer

That was demonstrated in part in the early sixties when NASA (National Aeronautics and Space Administration) initiated a series of manned chamber studies at Wright-Patterson Air Force Base to study sanitation and personal hygiene in a closed environment.

"There had been some concern," says Diane, "that if astronauts had to wear the same clothes—with little or no washing—for two, three, or more weeks, those guys would begin to rot. What did happen was that the bacteria in this closed environment reached a certain plateau. Then there was an interaction—a natural inhibition—that produced a dynamic balance and effectively prevented any one strain from going out of control. After the first few days when the stand-in astronauts got used to the odor, they didn't experience any discomfort at all. Of course, when they came out, we almost passed out."

Critical areas

Cleanliness, or the lack of it, seems to have little effect on individual well being. But there are some critical areas—water supply and waste management, for example—that can affect the health of astronauts. Bacterial growth in these systems can endanger the men and, ultimately, the mission.

During Apollo flights and all the preceding ones, there was no attempt at water reclamation because the missions were of short duration. Liquid body waste (urine) and wash water were either dumped or stored with solid waste until returned to earth. Filters, and the addition of either chlorine or iodine in the Command and Lunar Modules, inhibited bacterial growth in the water-supply systems.

What about longer-stay missions—earth-orbiting space stations or manned probes into deep space? They will stay out for six months, a year, even longer. One thing is certain. Carrying along all the water necessary for such a journey (as was done on Apollo) is not practical; there would be too huge a weight penalty exacted on the booster and the spacecraft. (Even in the shorter mission space shuttle system the bacterial protection of water delivered to orbit is of concern.) And that limitation also opens up other areas—water reclamation and waste management, to name two—that must be further investigated and perfected before such missions are possible.

"We're working in both of those areas," says Diane. "The main thrust in this department right now is in space water systems—water reclamation on long-term missions; processing wash water, atmosphere condensate, and urine to make them suitable for either drinking or other sanitary needs. And while there's a tremendous amount of engineering involved, the engineers themselves can't meet the criteria that NASA sets—sterile water.

"That's where we come in. Can the design provide the quality of water necessary? What must be engineered into the system to assure quality of water? Are there any entrapments or dead ends in the system that would encourage bacteriological growth? And finally, is this water sterile?

"And we're looking into various means of sterilizing a system if it fails. Say a red light goes on—contamination in the water! Rather than dump it, we're looking into the possibility of cleaning it up—by heat sterilization or filtration. Autoclaving—steam under pressure at about 250 degrees F—may be a possible answer.

"Whether that is possible will be up to the design engineers. They tell us if it's technically feasible. If it's not, we get involved in trade-offs—if we can't push it to 250 degrees, can we lower the temperature but maintain it for a longer period of time?"

Will it work?

In the lab itself, home-grown bacteria, brought up on nutrients suited to their own taste (different bacteria like to eat different food) are stored in refrigerators or incubators. Eventually, after all the discussions, the design arrives at the nitty-gritty stage—will it work? And so it is in the lab, during experiments in which these bacteria assist in their own demise, that these space systems arrive at their own moment of truth.

"From past experience, there are some things that we know a system should have. Ultimately, though, you have to test—pass waster through one end, and take it out the other end to find out what the quality is. In the lab we have the necessary equipment to take samples, examine them microscopically, and come up with an evaluation of the bacterial content. We can test a system by deliberately putting bacteria into it, then seeing if they grow, how fast, and how easily they can be eliminated."

It takes about five days between the time a sample is taken and a final accurate bacterial count can be made. Diane and her associates look forward to the day when an automated bacterial counter on board a spacecraft can punch that information out instantly.

"Our day isn't spent only in the lab. We may get 15 phone calls, say, on 30 different subjects; sometimes you have to give answers right off the top of your head. Then there are conferences with engineers and people in our own department—that's the Bio-Technology section of Advanced Development—on water reclamation units, personal hygiene, and other proposals for NASA contracts. Do we bid or don't we? So you can see," she added with a smile, "we're not ivory tower by any means."

Much of the impetus for the work now being done in the lab came as a result of investigations done in connection with the Gulf Stream Drift Mission. Although it was deep in "inner space" last July while Apollo 11 was making history with man's first moon landing, the submersible Ben Franklin and the men on the drift mission provided science—especially space biomedics—with invaluable data on life in a closed environment.

Help for the future

Diane points out that by analyzing bacteriological samples taken before, during, and after the month-long mission, they were able to draw certain conclusions and can now make certain recommendations about personal hygiene and sanitation during such a mission. In all, about 12,000 cultures on man, food, water, machine, and its environment went through the lab in connection with Ben Franklin. "We knew what sort of things had been done—anti-bacterially treated garments vs. non-treated ones, for instance—and then we could see from a bacteriological point of view whether it was good or bad, helped or made things worse; these are the bases upon which we can make recommendations for the future."

She and her fellow microbiologist Charles Petrusa (the only two of their profession at Grumman) are involved in a number of other areas that require their special talents. It wasn't long ago that Diane was clambering over an aircraft in Plant 4 getting fuel

(Continued on page 9)

Adm. Zumwalt named CNO; youngest in history of Navy

Adm. Elmo R. Zumwalt last week became the new Chief of Naval Operations, succeeding Adm. Tom Moorer, who was recently elevated to the post of Chairman of the Joint Chiefs of Staff.

In his new position, Admiral Zumwalt not only serves now as a member of the Joint Chiefs but also becomes the primary naval adviser to the President and to the Secretary of the Navy.

Operationally, he commands the Navy's 700,000-man active force.

A tireless, hard-nosed, and intellectual leader, Admiral Zumwalt is the youngest to serve as Chief of Naval Operations and the youngest four-star admiral in U. S. history. Five years ago, he was the youngest naval officer ever to attain the rank of Rear Admiral. He is now 49.

His somewhat meteoric rise from commander a decade ago to the Navy's top slot today seems to many the result of a variety of capabilities and outlook. He's rated as a wholly dedicated Navy man with an impressive zest for hard work (which, it is said, he expects from subordinates as well) and a talent for running a "tight" ship.

Navy chief. Secretary of Defense Melvin Laird swears in Adm. Elmo Zumwalt as new Chief of Naval Operations, succeeding Adm. Tom Moorer, who has been named as Chairman of the Joint Chiefs of Staff. (UPI photo)

Honors at Academy

He was graduated cum laude from the U. S. Naval Academy in 1942. Two years later, during the Battle of Leyte Gulf, he was cited for "heroic service as Evaluator in the Combat Information Center" aboard the destroyer USS Robinson and was awarded the Bronze Star Medal with Combat "V."

He served next as executive officer of the USS Saufley and later the USS Zellars, and, in 1948, was assigned to the Naval Reserve Officers Training Corps Unit of the University of North Carolina. In 1950 he took command of the USS Tills, and a year later became navigator aboard the USS Wisconsin. He was on the Wisconsin during the Korean conflict and received a Letter of Commendation, with Ribbon and Combat "V," from the Commander of the Seventh Fleet.

Admiral Zumwalt attended the Naval War College in 1952, served in many capacities aboard a number of vessels, and was a student at the National War College in Washington, D. C., in the 1961-1962 class year. In June of 1962 he was assigned to the office of the Assistant Secretary of Defense (International Security Affairs) and served first as desk officer for France, Spain, and Portugal, and later as Director of Arms Control and Contingency Planning for Cuba.

From December of 1963 until June of 1965 he was Executive Assistant and Senior Aide to Secretary of the Navy Paul Nitze. For duty in his tour in the offices of the Secretary of Defense and Secretary of the Navy, he was awarded the Legion of Merit.

After his selection as a Rear Admiral, he headed Cruiser-Destroyer Flotilla Seven, established the Systems Analysis Division, and, in 1968, became Commander Naval Forces, Vietnam, and Chief of the Naval Advisory Group, U. S. Military Assistance Plan, Vietnam.

Admiral Zumwalt is married and the father of two sons and two daughters.

Short shots

Cdr. Dan Pope, who is on the staff of the Commander-in-Chief Pacific Fleet, dropped in to Bethpage a couple of weeks ago for a briefing on the F-14, EA-6B, E-2A, and future ASW programs. Dan had been Commanding Officer of VS-24 and has flown more than 2,000 hours in the Grumman S-2 Tracker. . . . Clarence Speaker has been wearing a broad grin since Vice President Tom Rozzi showed up at Plant 77, Stuart, Fla., to wish him well on his assignment as lieutenant in the Plant Protection force there. In the ceremony attended by Stuart Work Center Director Bill Cobey and Plant Manager Art Melrose, Amos Saunders was named sergeant of Plant Protection.

Pat Lesnikowski would like to acknowledge the kindness and sympathy of friends and associates of her husband, Chet, who died suddenly in June after 32 years with Grumman. . . . Jim Compton of Research back in civvies after spending two weeks at the Defense Strategy Seminar at the National War College in Washington, D. C. Jim, a major in the Reserve, was one of 250 senior officers chosen from the various services to attend the seminar. . . . Grumman Data Systems named three to take on new duties recently. Those appointed as account managers were Don Clark, Accounting Services; Frank Lewis, Payroll Services; and Al Oerter, Communications Services.

George Emilio, who heads Future Business group in Product Support, Plant 5, heading back to school next month. George was selected to participate in the Executive Program in Business Administration, slated for August 16-September 26. The program is sponsored by the Columbia Graduate School of Business. . . . Mike Pescitelli was elected president of the Grumman Aerospace Club at KSC recently to succeed Clark Bridgeman. The management club slate also lists John Morrison, vice president, and Dick Lambert, secretary-treasurer. . . . Imagine the surprise Doug Bergeron's teacher got when she asked the seven-year-old what he would do if he went to the moon. As his father, Armand, who works in Flight Acceptance, Plant 6 tells it: He showed that he's aware of what's going on in space by supplying her with words and pictures (his own): "When I go to the moon, I would walk on the moon. I would walk from the LM to the place I'll drill. I would drill on the moon. I would come in a rocket ship. I would sleep in the LM."

Part-time students earn full-time degrees

The season for awarding academic degrees has come (and gone), leaving these Masters' degrees, earned the hard way in evening and summer study. Most were achieved with the aid of the Grumman Evening Scholarship Program.

CITY UNIVERSITY OF NEW YORK

Abraham M. Frydman, Rocket Propulsion, Plant 39: ME (ME); David Gellman, Rocket Propulsion, Plant 39: ME (ME).

FLORIDA STATE UNIVERSITY

Edward T. Barron, Test Operations, Plant 83, KSC: MS.

HOFSTRA UNIVERSITY

William F. Geurdes, Ground Test Instrumentation, Plant 5: MA (Physics).

LONG ISLAND UNIVERSITY

Robert K. Allen, Business Development, Plant 5: MBA; Michael DeSanto, Section Planning, Plant 35: MS (Mgt. Engg.); Sidney Leinoff, Structural Designers, Plant 1: MS (Mgt. Engg.); Roger E. Metzger, Antennas & Radomes, Plant 14; MS (Mgt. Engg.); Thomas J. O'Brien, Mission Analysis, Plant 25: MS (Mgt. Engg.); James C. Reed, Operations Analysis & Planning Research, Plant 5: MBA.

NEW YORK UNIVERSITY

Alan B. Newman, Operations Analysis & Planning Research, Plant 5: MS (Ops. Res.); John A. Steen, Loads & Criteria, Plant 1: MS (Aero & Astro).

POLYTECHNIC INSTITUTE OF BROOKLYN

Anthony Antonucci, Control Systems Analysis, Plant 25: MS (EE); Harley B. Arnold, Machine Operations - Technical Service, Plant 3: MS (Ops. Res.); John F. Bevacqua, Simulator & Digital Development, Plant 33: MS (EE); Vincent Cirrito, Equipment Thermal Design, Plant 15: MS (Chem. Engg.); Michael F. Cycon Jr., P/S Fluid Mechanics Engineering/Design, Plant 4: MS (ME); Charles M. Esposito, P/S Digital Engineering, Plant 34D: MS (EE); Robert E. Freyer, Advanced Processes, Plant 12: MS (Ind. Mgt.); Wilbert J. Holmer, Control Systems Analysis, Plant 35: MS (EE); Raymond H. Laning, P/S Management Information Systems, Plant 41: MS (Ind. Mgt.); Michael W. Logan, Electrical Power Systems, Plant 34D: MS (EE); Robert E. Maher, Armament, Plant 1: MS (ME); Vincent P. Maone, Systems Design, Plant 15: MS (EE); David Pravidlo, System Reliance - Maintainability, Plant 35: MS (EE); Francis J. Prokop, P/S Digital Engineering, Plant 15: MS (Ind. Mgt.); Sigmund Robinson, P/S Digital Engineerng, Plant 15: MS (EE); Haywood S. Satz, Control Systems Analysis, Plant 36; MS (EE); Christopher Sikalis, Systems Design, Plant 15: MS (EE).

Special supplement

Watch for a special four-page insert on Affirmative Action Programs at Grumman in the next issue of Plane News, July 24.

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Apollo—is it worth the price?

"Somehow it seems that in the last few months the moon has lost something. Rather than being a mystery of green cheese or precious metals or a habitat of strange life, its veil has been lifted and some of the romance has disappeared into harsh reality."

Dr. Ralph Tripp
Director of LM Program

So said Vice President Ralph Tripp, director of the LM and OAO programs, at Rocky Mountain College, Billings, Mont., where he received the honorary Doctor of Science degree early in June. His address challenges those who see the moon missions only in terms of expense. "Going to the moon is a goal for all kinds of scientific advances," he likes to point out. "Consider the materials that have been developed, the advances in mathematics, astronomy, chemistry, medicine, construction, and metallurgy engendered by the moon mission."

He predicts that "it will be a long time before any space spectacular approaches the lunar landing made on 20 July 1969."

Cost seems to be the primary deterrent. But as Dr. Tripp observes, history will probably not mention that, for "the costs recorded by history tend to be costs which were ridiculously low, such as the purchase of Manhattan Island from the Indians and the Louisiana Purchase from France.

"The cost of the space exploration program in the 1960s was about 25 billion dollars. In the same period of time nearly 80 billions of dollars were spent on tobacco and almost 130 billions of dollars were used to purchase alcoholic beverages."

In a real sense, the "costs" of achievements cannot be reckoned in terms of human values—especially since he believes that "the space program will continue to act as a spur to other parts of our society, providing a needed challenge and a yardstick by which to measure human achievements in other areas. . . .

"Of course some have grumbled that we are doing too much in space, with so many unsolved problems here on earth," says Tripp. "But the positive approach is not to do less in space but to do more on earth—and do it better.

"We must continue space progress while at the same time applying the lessons we have learned from our space achievements to other U.S. needs. If this nation can go to the moon, it can, and indeed must, do far better in meeting our other challenges. America's space achievements surely increase, not decrease, our hope, our ability, and our national resolve to face and overcome new and chronic earth problems."

He points out that space work has led to advances here at home. One example is that during a study of possible space radiation effects on astronauts, a researcher found that "the electrical voltage across the surface membrane of a normal cell acts to exert precise control over cell division. This implies an alteration in the molecular structure of the cell surface that permits the uncontrolled cell division characterizing cancer. This wholly new theory, verified in preliminary tests, has opened a promising new avenue for possible chemical control of cancer."

Technical advances

Tripp also cites an example from NASA's biological research efforts that led to the development of the world's most powerful electron microscope, one "capable of magnifying objects 20 million times and resolving images down to two angstroms. To handle the electric power necessary to operate the microscope without melting required another breakthrough to cool the magnetic lens of the microscope: the first large-scale continuous closed-cycle production of superfluid helium.

"In order to use the full magnifying power of the microscope, it was necessary to prepare specimens to the same scale. The diamond knife invented . . . to solve this problem can dissect away portions of a molecule or cut a hair into 10,000 lengthwise strips. In order to record images from the electron microscope, a film virtually without grain was required—and invented. It works instantaneously and can be converted readily into color images by interference microscopy."

The open frontier of an empty hinterland and the challenge of major wars, Tripp says, provided the impetus for "vigorous American scientific and technological advance." The movement westward "stimulated advances in sailing ships and steamboats, canals and railroads, agriculture and farm machinery, electric power and telephony, highways and autos, radio and television, and transcontinental pipelines and airlines. New technologies provided the needed new communications and new mobility for people and freight on a continental scale.

In addition, the Civil War and two World Wars accelerated U.S. industrial development in the heavy metallurgical industry, shipping, chemicals, aviation, electronics, synthetic materials, pharmaceuticals, nuclear power, and other areas. Now the space age is adding an effective new stimulus.

Noble motivation

During the 1960s, without a new land frontier and without the anguish of global war, the American space program combined the forcing functions of both—and did it with noble motivation: exploration of the unknown, the expansion of knowledge, unselfish sharing of the new for the betterment of all, and reduction of international tension.

Even the accident to Apollo 13, and the various problems that had to be solved quickly and accurately in order to bring our astronauts back home safely, added to our knowledge. And, as Tripp says: "The events of Apollo 13 are forcing us to take a closer look at potential rescue systems for future missions—Apollo and beyond. One area being investigated involves the retention of the LM Ascent Stage as a permanent lifeboat, staying with the astronauts almost all the way back to earth."

Tripp feels that the future of space exploration is exciting. Sooner or later an astronomy observatory will be set up on the moon with large telescopes to study the universe. Within the next 15 years there will be a manned space station orbiting the earth and there will be an airplane type shuttle to carry men and supplies between earth and the space station. There may well be a similar space station orbiting the moon to be a link in a rescue capability for operations on the moon.

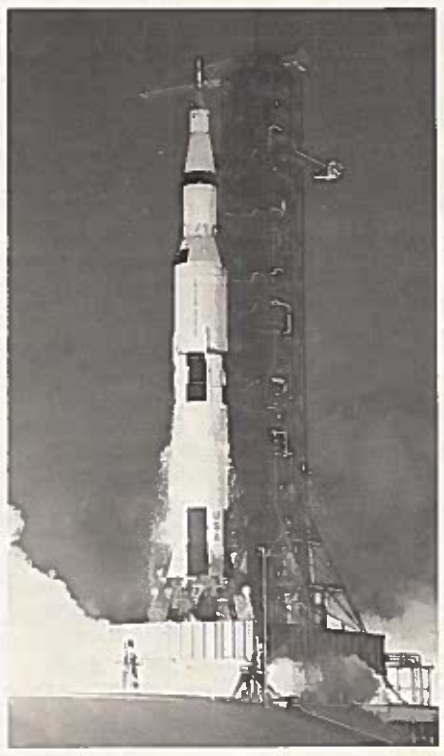
Deep space exploration

"These space stations on the moon itself will become take-off points for deep space exploration since they will be outside most of the earth's gravitational pull and will, therefore, require much smaller boosters than would be required from the earth's surface. These space stations will be used as scientific laboratories and possibly even for the manufacture of items which require a hard vacuum and zero G environment."

Of course he is optimistic about the future. As he says, "There will continue to be unmanned probes to make observations in the vicinity of other planets and further out into our galaxy and certainly within the next 25 years there will be a manned landing on Mars. Much development and research remains to be done to get men to Mars and back since the round trip will take at least 20 months. The most difficult aspects of the Mars journey have to do with maintaining living conditions and supplies for the crew as well as the mental and physical well-being of the crew in restricted quarters and under zero G conditions for such an extended period of time."

Judged as a whole, Tripp believes that the space effort has been "a major stabilizing force in world affairs by supplying an alternative to military confrontation, for demonstrating to the world relative national power without upsetting the delicate balance of international security. And continuing U.S. progress in space . . . constitutes a stabilizing force in the world—a program which inspires international respect and cooperation.

"Space has made the world seem smaller, more fragile and precious, and at the same time made man seem larger. Our view of the entire globe from space inspired Archibald MacLeish 'To see the earth as it truly is, small and blue and beautiful in that eternal silence where it floats.' I am sure this has provided a new stimulus for man to look harder at his environment here, and to resolve to decrease pollution by managing the life support systems of 'spacecraft earth' as carefully as we do those of Apollo, tempering our appetites for the present with an increased regard for our future."



GAA gets heavy support in member drive

Prize picker. **Gay Wood of Quality Control, who was active in assisting the GAA in its membership drive, had the honor of drawing the first ticket as 15 Polaroid cameras and 50 sets of Grumman glasses went to lucky ticket buyers. Checking winner's name are Mike Cherry (C) and Chet Baumgartner of the GAA staff. (Photo by Marie Trimborn)**

The Grumman Athletic Association has received a warming gesture of support for its 1970-71 program.

GAA Director Bob Benn announced that 21,973 Grumman people answered the appeal by buying $1 membership cards. These funds will be used to continue a wide program of inter-department events and other club activities, including prizes offered to the winners in leagues and tournaments. All the varsity teams are supported by Company funds.

"This sure looks pretty good," Benn commented. "That 75 percent is the highest we've ever reached."

Campaign manager Mike Cherry of the GAA also was elated. "I want to thank all who helped us on this drive. There were many people in the Company who worked hard on making this drive a success, and you can be sure that we are deeply grateful to all."

Following the close of the membership drive, a special drawing was held with 15 Polaroid model 350 automatic color pack cameras and 50 sets of Grumman glasses as the prizes.

The drawing was held in Plant 28B (GAA Office), with the first ticket being drawn by Gay Wood of Quality Control, then with members of the GAA Board assisting. This group includes Charlie Solarski, Roy Stephenson, Vic Matuza, Mike Grobeck, Frank DeDe, Gus D'Errico, Steve Lawrow, Phil Musa, and Rollie Corwin.

One of the camera winners was Boleslaw Muezenski of the Seat & Survival Department in Plant 31, and he was one of the most amazed men at Grumman. Muezenski has been with Grumman 25 years, and recently returned from Cape Kennedy and an assignment on the LM program.

"Why, I wouldn't believe it," Muezenski exclaimed. "After buying GAA tickets for 25 years, I thought someone was kidding me when I was notified I finally had won a prize. It's the first time, and I guess I had just about given up hope."

Another winner was John Marek, a professional photographer from the Plant 5 photo lab. "What are you going to do with another camera?" he was asked. He grinned, and said, "That's easy. I gave it to my wife as a present. She had wanted a camera anyway. This Polaroid is fully automatic, so we won't have any trouble that way—it'll keep peace in the family."

Other camera winners were Philip Fischer and William J. Douglas of Plant 3; Walter Supper of Plant 2; Frank Dioguardi of Plant 4; Michele Kiene, Charles Hess, Lloyd Coleman, and Mike Hoare of Plant 5; Charles Jacob and George Galley of Plant 30; Robert Bloomquist of Plant 31; Louis Popovich of Plant 34; and Marvin S. DeBerry Jr., of Plant 55, Savannah, Ga.

The winners of Grumman glasses:

PLANT 1: George E. Clark, Fred Zeisner Jr.
PLANT 2: George Andreani, Frank D'Amico, Richard Donohue, Theodore Karlecke
PLANT 3: Hosea Lee, Howard Serebrenik
PLANT 4: Joan Reid
PLANT 5: Robert Mallin, Gordon Rogers, Ralph Schneider, Robert Williams
PLANT 7: Michael Cooke, Thomas Kattau, Clifford F. Lennon Jr.
PLANT 11: Henry P. Gage
PLANT 14: Fred Davis, Roger E. Metzger, Lyndall Upton
PLANT 15: George Devoe
PLANT 20: Jeremiah Turner
PLANT 22: Edwin C. Duncan Jr., Albert Kane
PLANT 25: Robert Gormly, James Mastroianni
PLANT 27: Earle Burch
PLANT 28: Joseph Naud
PLANT 29: Anthony Scipione, David Sontag
PLANT 30: Raymond Montano, Carl A. Paladino
PLANT 32: Henry W. Babcock, Herman Saar, John C. Worden
PLANT 34: Alfred Brady, Christian T. Harre, Salvatore Nofi Jr.
PLANT 35: Frank Beagan
PLANT 36: Peter Lund, Matthew Metzger
PLANT 38: George A. Erb
PLANT 50: Walter R. Clark
PLANT 55: David Buxton, Morgan Cobb
PLANT 56: Dick C. DeVoe
PLANT 57: Stephen Foster
PLANT 77: Harry W. Curran
PLANT 83: Jeremiah Hubschman
PLANT 87: William A. Bell Jr.

GDS extending . . .

(Continued from page 1)

pilot computer-based system. Jim Trygg and John Wandzilak are working on this.

• **Data Systems Institute.** A fifth activity of Grumman Data Systems, this is now in its second semester. "A source of good talent for the computer industry. We don't in any way promise jobs to the trainees, but we have hired a few of the graduates ourselves," Viemeister says. The Institute on West John Street in Hicksville teaches computer programming in a 300-hour course, at a tuition fee of $1,350.

At present the Grumman Data Systems administration offices are in Plant 41, Melville, but by next spring the new Data Systems Center on Stewart Avenue will be completed, providing an integrated home for all GDS personnel and computing equipment now housed in Plants 5 and 30.

Says Viemeister, "We're off to a good start. It's encouraging. But it's just a start."

NASA contracts

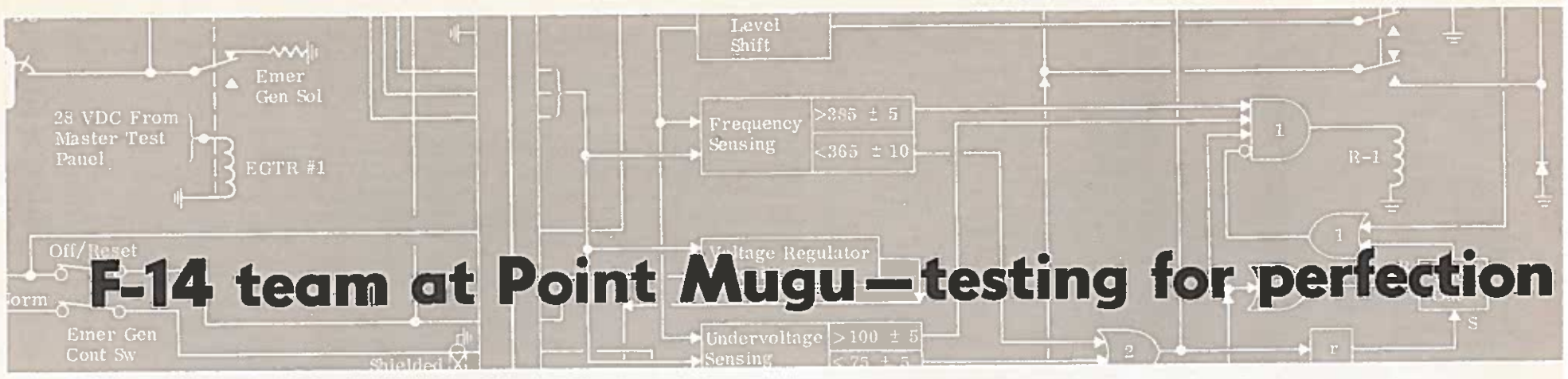
(Continued from page 1)

One-year options are noted for the next three 12-month periods, through June 30, 1974.

The work to be performed is for support of the OAO project at the Goddard Space Flight Center in the integration and testing of OAO-B and OAO-C, both at GSFC. The money also goes toward mission operations for OAO-2, now in its 20th month of orbiting the earth, and toward OAO-B mission operations.

OAO-2 has carried out extensive investigation of the stars in the ultraviolet spectrum since its December 1968 launch. OAO-B and OAO-C will carry advanced technologies to study stars.

Going up. **Grumman Data Systems Center is progressing toward completion on Stewart Avenue, Bethpage, just west of Plant 35. By next spring this modern facility will be providing a new home for GDS personnel and for computer equipment now housed in Plants 5 and 30. (Photo by Nat Scherer)**



F-14 team at Point Mugu—testing for perfection

POINT MUGU, Calif.—On the third deck of the Laboratory Integrated Systems building here sits SITS, the Grumman-conceived "development tool" that, spelled out, means Systems Integration Test Site. It's SITS that stands at the center of the effort to prove out the F-14 weapons systems, and to do it "on the ground" rather than in the air—in half the time it typically takes to check a complex avionics system.

By using SITS, the number of flight tests needed for the F-14A will be sharply reduced, thereby saving time and money. Instead of the 34-to-36-month period usually required to prove that an avionics system really works, they expect it'll be done in no more than 17 months.

That's not a puffed-up, unrealistic figure. The SITS method has been proved. It was done at Calverton for the EA-6B program. At that time, Tom Brancati was the systems project engineer; now Tom's the deputy project manager at Point Mugu.

The value of SITS is best understood by taking a look at the old way of doing things:

A new aircraft, loaded with sophisticated avionics equipment, is being test flown and the pilot (or the ground station) picks up a glitch. So the plane comes back to the landing strip and some assessments are made as to what went wrong. An educated guess is made and up goes the plane again. Maybe the bug has been corrected . . . but maybe it hasn't and the aircraft's back on the ground again for yet another checkout. Then there's another flight test. Perhaps the bug has been corrected; but another one crops up, and the ground-flight-ground cycle is repeated again. That's an expensive, time-consuming business.

SITS steps in with a different approach, says Rudy Kretschek, Engineering manager at Mugu. "You check each 'black box' on the ground, tie two together and see what happens, then three, then four, and so on, in exactly the way they'd be located in the plane. When they're all playing together—in harmony, so to speak—pick them up and simply put them in the aircraft. And why not? After all, the bulk of the avionics 'flight testing' has been accomplished, without leaving the ground."

That's the simple sketch of it, and like all sketches, a lot has to be filled in before the final article is ready for sale. The "filling in" is going on now at Mugu, where the blue-green waters of the Pacific Ocean slide in—it seems, almost unnoticed!—to meet a fairly flat stretch of land to the north and east, and be confronted by a low range of humpback gray hills to the south. This is the location of one of the nation's six missile ranges.

The Navy is executive agent of the Pacific Missile Range although all U. S. military branches, Federal agencies, and "authorized industrial concerns" may use the extensive facilities. Operation and support of the Range are provided by the Naval Air Systems Command, under the chief of Naval Material.

This National Range operates a far-flung network of facilities which provide range support for launching, tracking and data collecting in guided missile satellite and space vehicle programs, and in operational tests. Range services are provided for the Fleet, whose ships and aircraft fire their missiles on the Range at realistic targets in training exercises for ships' crews and aircraft pilots.

Tony Benjes, F-14 Point Mugu Project manager, says, "Mugu is an ideal location for developing the F-14 avionics systems and for later associated flight testing. Just about everything that we and the Navy need is right here; and there's such good, close cooperation that each can rely on the other. If we need something and the Navy has it available, all we have to do is ask and it's ours. It's one of the real benefits of being at Mugu."

Visibility at Mugu

Then, too, there is the mutual (Navy-Grumman) advantage of real visibility. "We're working in the Navy's living room," is the way Ray Yerden, ILS (Integrated Logistics Support) Material manager, puts it. And Production manager Phil Tartas called it "being in a fishbowl," which he didn't find objectionable: "You don't worry about a fishbowl if you're doing your job." So visibility—the "fishbowl"—isn't a worry-point at Mugu; the opposite is the case.

The commanding officer of the Naval Missile Center at Point Mugu, Capt. Lewis A. Hopkins, sees it that way too. In talking of the fine teamwork among Navy, Grumman, and Grumman's associate contractors on the F-14, he observed that "Everyone's primary concern is to know what's going on, to find any deficiencies early in the game when corrections are easy. That permits all of us to concentrate on real issues."

He cited the "excellent rapport" between the Navy and Grumman.

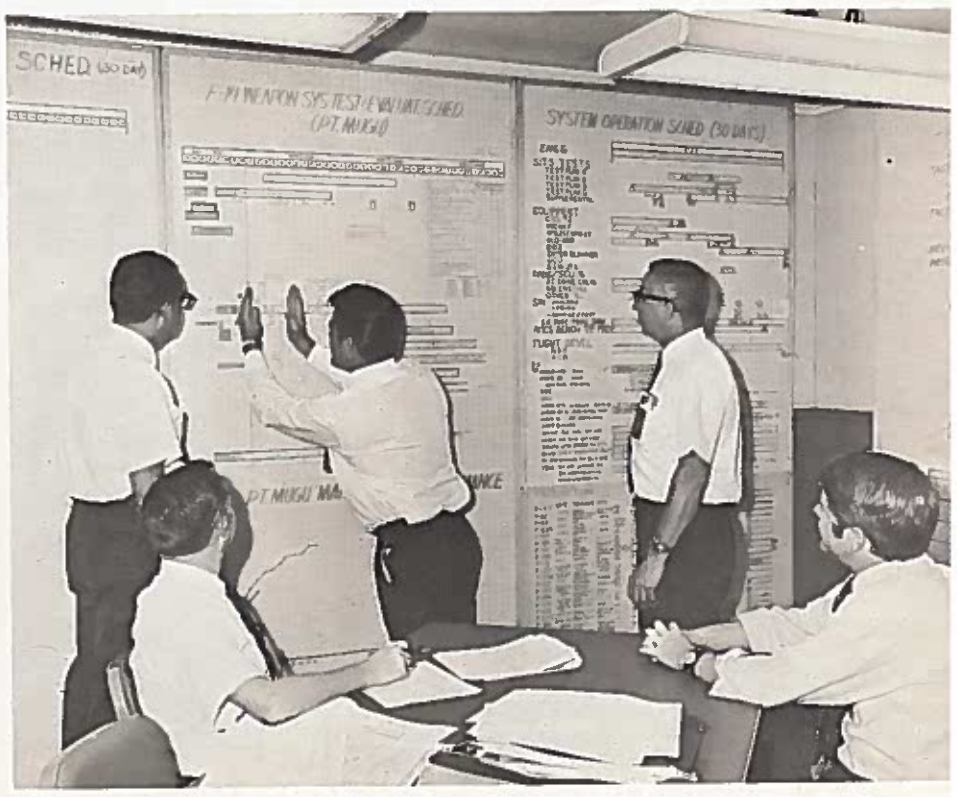
Another plus that flows from the Point Mugu operation is that many associate contractors have offices or are based on the West Coast—Hughes Aircraft, Litton, Kaiser, IBM, Teledyne, and AiResearch, for example. Instead of a 3,000-mile communications loop, there's a tighter and quicker one, "just around the block," as Phil Biancone, Technical Services manager, expresses it. That's important, especially in a taut program like the F-14: Schedules have to be met on time and within costs. The alternative is severe financial penalties for non-compliance. The profit margin is at stake on this program.

Every Grummanite, whether an old hand or a new local hire, seems aware of the challenge, the stakes, and the promise. Perhaps one of the best expressions of that Mugu mood was voiced by Russ Irwin, Quality Control manager:

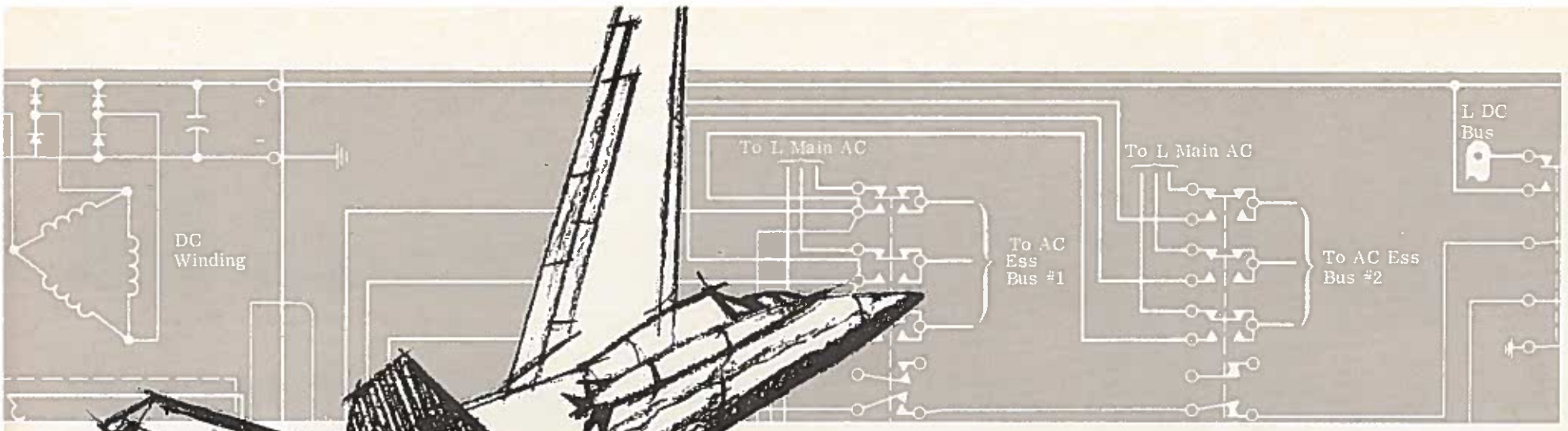
"There aren't any sitters here. They're all doers."

Indeed, that is the climate, and the remarkable part of it is that despite the somewhat feverish pace there appears to be a unity of effort, a subtle feeling that everyone is going in the same direction. The "disputes" (if they really can be called that) boil down to ques-

Top brass. Men leading the Grumman effort at Point Mugu, Deputy Project Mgr. Tom Brancati and F-14 Project Mgr. Tony Benjes, get together on scheduling SITS.



Time frame. Phil Biancone (C) indicates next program step to (L to R) Jim Kelly, Program Scheduling; Roger Tully, Data Management; Mark Mertens, Program Planning and Control; and Pat Dugan, Configuration Management. (Navy photos)



tions of procedure—of how best to do the job at hand. The heat of discussion, then, is productive; it results in something thoroughly positive.

Part of that may be directly attributable to two meaningful factors, expertise and size. Every one of the Grummanites—whether he'd been at Bethpage or White Sands, Calverton or the Kennedy Space Center—went to Point Mugu with a well-honed skill. He ranked at the top rung of his specialty. The other, less definable ingredient is an esprit d'corps that probably is generated easier in small, compact organizations, like the Grumman one at Mugu. There are about 160 Grumman people on board. They're here because of their "smarts" and their ability to set up a new organization. Coming in to assist them is a growing number of people with "smarts" who live on the West Coast and are new Grummanites; and by the end of next year, it's expected that the number of people hired locally will form the majority.

Emphasis on development

But that's in the future. Right now the emphasis is to be on developing the avionics systems that will contribute toward making the F-14 the finest air superiority fighter in the world—with the expectation that it will be the premier Navy fighter for 15 to 20 years. It is a plane specifically designed for change.

To call it a "plane" may raise the hackles of more than a few people, however. Even "aircraft" may not satisfy some. For example, Cdr. Jim Tucker, who is the F-14/Phoenix Program manager, Point Mugu, says:

"The F-14 is not just an aircraft but a weapons system. It has to be looked at that way. Its weapons are of prime importance."

Those on the avionics side of the shop—concentrated in Mugu now—can raise a toast to that sentiment. And well they should. At the same time, they recognize fully that it's the **entire** aircraft that must perform a variety of missions: dog fighting, air-to-ground and air-to-air missile firing, defending the Fleet . . .

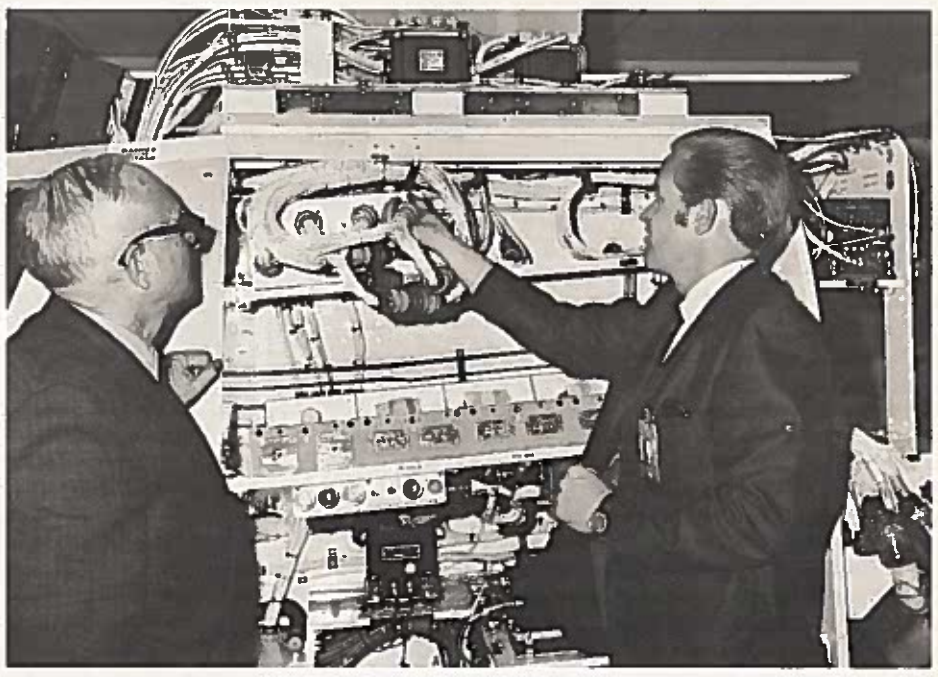
It's been called a plane for all reasons; in terms of meeting the threat, perhaps that's the best capsule description.

And there is a threat. Right now the F-4 is the Navy's top fighter, and it has served well. However, think about this:

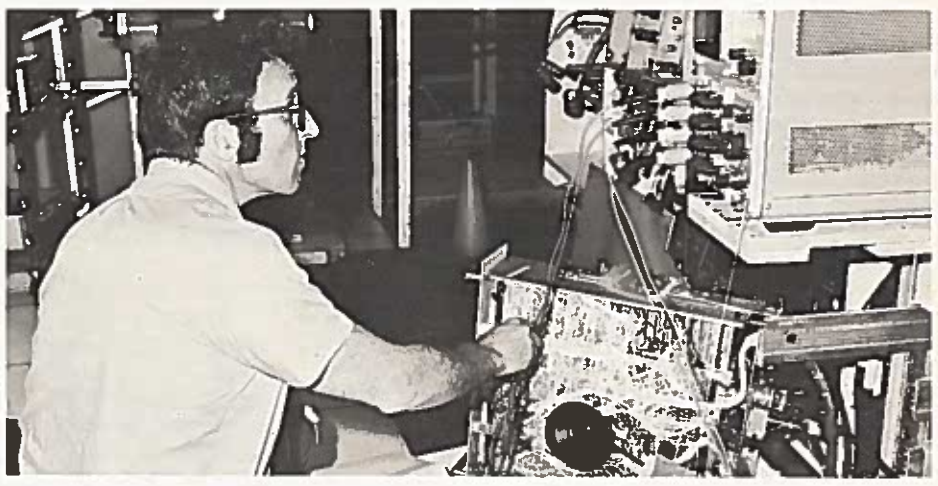
- The Soviet has not consigned any of its front-line aircraft to combat. (MIG-21 is a second-line fighter)
- The Soviet inventory includes top-notch aircraft: Foxbat, Fiddler, Flagon A
- And the Soviets have introduced a new or improved fighter at the rate of one per year

The job to be done, then, is a real one, a tough one, and an urgent one. Viewed in a cold realistic way, getting an excellent weapons system out in 17 months as opposed to 34 months is hardly gamesmanship or competition for its own sake: It is a national defense requirement.

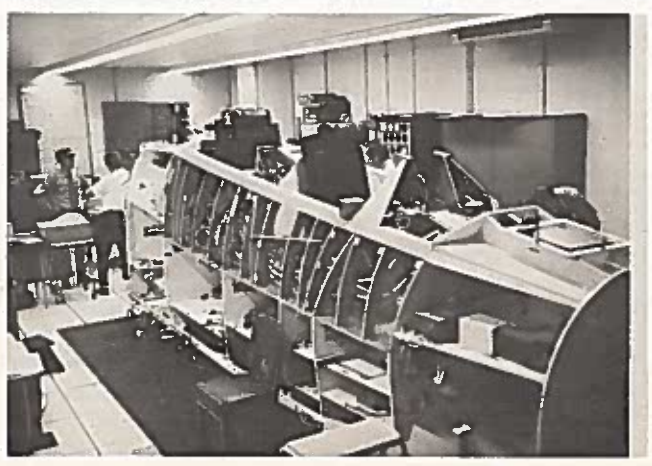
Perhaps it is that knowledge that has turned the Grumman team (and **team** really is the correct word) into the hard working, efficient, and challenge-oriented group that it is. How is it being done? Who and what's involved? How does this "Calverton of the West" really tick? These are questions to be attacked in the next article on Point Mugu.



Navigation complex. **The profusion of lines in the forward module of SITS testifies to its complexity. Here, Brian Conway of Product Support and Al Tregembo, a Teledyne resident engineer, examine an electrical harness.**



Checkout. **Systems engineer Hy Dreksler trouble-shoots a circuit in the SITS at Point Mugu. Every piece of equipment must be tested fully prior to its installation in the test vehicle.**



Getting ready. **SITS is at the ready for acceptance of AWG-9, a computer subsystem vital to weapons system performance.**

F. H. Heaney
Propul. Comp. Test

A. Stokey
Parts Control

J. P. Lunetta
Tool Fab.

G. H. Felicetti
Safety

F. R. Weiss
Press

H. Mierzejewski
Parts Paint

W. P. Leitch
Plant Stores

F. L. Sapone
Prod. Control

L. D. Rockwell
Corp. Officer

They're celebrating—nine hit 30-year mark while 25 others reach silver anniversaries

Nine men, including Vice President Ed Nezbeda, are completing 30 years of service to lead off the Grumman annivarsary roster this month. They are: William Oborn, Prototype, Plant 1; Edward C. Nezbeda, Vice President - Manufacturing Engineering, Earl M. Tobie of Prototype, Joseph R. Nowotny, Propulsion Component Test, and Charles N. Tacke, Manufacturing Engineering Administration, all Plant 2; Robert L. Gustafson, Operations Analysis & Planning Research, Plant 5; Frank E. Prochaska, foreman, Center Section Sub-Assembly, Plant 11; Andrew Bahry, F-15 Production Management, Plant 15; Forrest T. Pearsall, Requirements Planning, Plant 30.

Twenty-four men and a woman will reach Silver Anniversary status in July. A quarter of a century ago World War II was nearing its end, but no one could fortell how soon. The Grumman F7F Tigercat, the Company's first twin-engine fighter, was just being introduced to Navy and Marine service, and the 10,000th Grumman Hellcat had just been delivered. Peace had come to Europe, but the fighting was fierce in the Pacific. The British and American fleets under Adm. William F. Halsey were attacking in and around Tokyo, and the Third Fleet was pounding the Naval base of Kure on the Inland Sea.

These "old-timers" have continued with Grumman during the intervening years:

PLANT 2: Frank H. Heaney, Propulsion Component Test; Alfred Stokey, Production Control - Parts Control/Major; Joseph P. Lunetta, Tool Fabrication/Templates; George H. Felicetti, Safety.

PLANT 3: Francis R. Weiss, Press; Henry Mierzejewski, Parts Paint; William P. Leitch, Plant Stores & Distribution.

PLANT 4: Frank L. Sapone, Production Control - Management.

PLANT 5: Lawrence D. Rockwell, Secretary, Grumman Corporation; John T. Tucker, Static Test; Douglas Van Nostrand, Instrument Fabrication Repair; Ralph D. Benedict, Cold Flow.

PLANT 6: Arnold A. Hendrickson, Final Paint; Edmund H. Munson, Production Control - Configuration/Identity/Traceability.

PLANT 22: George C. Stephani, Methods Engineering - Special Details.

PLANT 25: William H. Bruning, Advanced Space Systems.

PLANT 30: Sydney W. Fitterer and Theresa M. Donlon, General Purchasing.

PLANT 34: Lawrence G. Olsen, Power Plant Design.

PLANT 35: Frank S. Tupper, P/S Verification & Product Support; Howard M. Shepard, Mechanical Systems.

PLANT 41: Theodore D. Gaal, P/S Management Information Systems.

PLANT 77: George E. Tschudi, Base Management & Staff, Stuart, Fla.

PLANT 83: Ralph A. Franza, KSC Manufacturing Offices.

PLANT 87: Leonard G. Wheeler, Manufacturing Engineering Management, Los Angeles.

•

Eighteen men and two women round out 20 years at Grumman in July:

PLANT 1: Arthur E. Graham, Instrument Test.

PLANT 2: Richard W. Gehrt, Manufacturing Technology - Manufacturing Engineering Liaison.

PLANT 5: Anthony J. Way and Gerard G. Brinker, Final Assembly.

PLANT 6: Albert M. Schmidt, Instrument Test; Franklyn Baumann, Transportation.

PLANT 8: Paul E. Shadlich Jr., Repair Control.

PLANT 14: Winfred W. Mains, Hydraulics.

PLANT 15: Thomas A. Taglarine, Program Management - F-14A; Michael Pelehach, Vice President - F-14 Program director.

PLANT 25: Robert L. Seebol, Crew & Equipment Integration.

PLANT 27: John P. Blazejewski, Plant Stores & Distribution.

PLANT 29: William J. Watson, Controls.

PLANT 30: Jane R. Gerrity, Materials Accounting.

PLANT 33: Joseph B. Gogarty, Inspection - Support Equipment.

PLANT 34: Howard Marshak, Structural Designers; Muriel Nordstrom, Quality Control Program Management, A/C.

PLANT 35: Elmer M. Bauer, Experimental Dynamics; Robert S. Glowacki, Standards; Edward G. Markow, Advanced Space Systems.

•

Forty-one hit the 15-year mark:

PLANT 1: Thomas Tatarian, Manufacturing Engineering, F-14 Project Management; Leonard J. Ober, Manufacturing Technical Mechanical Process; John H. Semcken Jr., Business Development.

PLANT 2: Frank Hejduk Jr., Support Equipment Production; Francis D. Barnes, Inspection - Mechanical.

PLANT 3: Fred F. Durham, Facilities Maintenance.

PLANT 5: Henry J. Frederickson, Machine Shop; Casper Catalanotto, Data Acquisition; John J. Gilbert Jr., Ground Test Instrument.

PLANT 7: Lawrence B. Brown Sr., Hydraulics.

PLANT 15: Joseph Casey Jr., Product Support Program Management; Robert S. Rulon, Product Support Servo Engineering & Training Development; John J. Giunta, Project Engineering - Development A/C.

PLANT 17: Richard W. Harris, Saw; John Schifano, Government Material Control.

PLANT 22: Seymour Zenlea, P/M - Management Information Systems.

PLANT 23: Anthony A. Giancola, Facilities Maintenance.

PLANT 25: Francis W. Scheri, Manufacturing Engineering Project Management; Rudolph J. Skipala,

(Continued on page 9)

J. T. Tucker
Static Test

D. Van Nostrand
Instr. Fab. Rep.

R. D. Benedict
Cold Flow

E. H. Munson
Prod. Control

G. C. Stephani
Meths. Engg.

W. H. Bruning
Adv. Space Systs.

S. W. Fitterer
Purchasing

T. M. Donlon
Purchasing

L. G. Olsen
Pwr. Pl. Des.

F. S. Tupper
Prod. Support

H. M. Shepard
Mech. Systems

T. D. Gaal
P S M.I.S.

G. E. Tschudi
Base Mgt.

R. A. Franza
Mfg. Office

L. G. Wheeler
Mfg. Engg. Mgt.

Trio of Plant 3 inspectors top idea men

Clear plastic proved valuable as template material in Mechanical Inspection, Plant 3, and gained three men a combined Employee Suggestion award of $825 in the most recent Company assessment of time-saving ideas. Twenty-four other idea men received $3,775, with Dominick Rullo of Sub-Assembly, Plant 2, scoring with three separate suggestions.

Theodore Flynn, Austin Diebel, and Frank Swanson were the Plant 3 inspectors who earned the top award of $825. They noted that with a template of clear plastic they could point out the spots where Vidigauge readings were required before and after chemical milling. Use of such a template eliminated the tedious job of hand layout on large chem milled parts, and even an inspector unacquainted with the location job can use the template successfully.

Next highest award, $700 in bonds, went to Wilfred Garon and Richard Fuori of Heat Treat, Plant 3, for suggesting an improved tie method to hold assorted parts to mesh screen in preparation for cryogenic quenching.

Bill Tennant of Inventory Control, Plant 30, received a $600 award for suggesting purchase of aluminum alloy sheet for specified uses in "F" instead of "O" condition at a saving in buffing time and dollars.

$500 went to Albert Helrigel, Tool Fabrication - Jigs & Fixtures, Plant 27.

$350: Larry Cyr and Gary Van Aller, Machine Operation - Planning & Control, Plants 2 and 3.

$175: Robert Andrews, Honeycomb, Plant 3.

$150: Frank Apa, Final Assembly, Plant 36; Tom Caccamo of Static Test, Plant 5 (formerly Sub-Assembly, Plant 2) and John Menell, Steel Parts Assembly, Plant 2; Joseph Jaeger, Fuselage Minor, Plant 36; Bert Nessel, Instrument Test, Plant 33.

$125: William Holler, Tool Fabrication, Plant 27.

$100: Michael DeSanto, Manufacturing Shops, Plant 83, KSC; Dominick Rullo and John Menell, Sub-Assembly, Plant 2; Vernon Sims and Fred Owens, Maintenance, Plant 55, Savannah.

$50; Bernard Braun, Hydraulics, Plant 7; Anthony Carioli, Critical Material Control, Plant 24; John Corrigan, Tool Fabrication, Plant 2; Mark Darden Jr., QC Inspection, Plant 56, Glen Arm; Joe LoPreste and John Patterson, Final Assembly, Plant 36 and 1; Dominick Rullo and Tom Caccamo, Sub-Assembly, Plant 2; Dominick Rullo and Frank DeMartini, Sub-Assembly and Tool Fabrication, both Plant 2.

Something to think about

Nobody wants to live forever. On that, most people would agree. But getting them to decide just when they'd like to leave this world is something else again. All of a sudden, livin' doesn't seem half-bad at all.

And you can increase your chances of being around a helluva lot longer if you finally kick the smoking habit. Why should **you** kick the habit? Here are some considerations on which the U.S. Government and at least 19 national organizations agree:

- Smoking is a major cause of chronic bronchitis, lung cancer, heart disease, and is a contributing factor in emphysema.
- Cigarette smoking shortens your life.
- Heavy smokers who do quit can add to their life expectancy.
- Kicking the habit makes it easier for you to breathe, you will feel less tired, your circulation and your sense of taste and smell will improve, and your heart and lungs will have a chance to defend themselves.

You think it's all a put-on? Visit any plant Medical room and there you'll find plenty of literature to back up these facts. And one more thing—21,000,000 (that's 21 million) Americans have kicked the smoking habit. This is one time it's smart to join the crowd. Think about it.

Twenty-five mark silver anniversaries

(Continued from page 8)

Shock & Vibration Test; Willy A. Wolter, Structural Temperature; Arnold P. Schaffer, S/CAT Management & Staff; Marten R. Woodward, Quality Control Program Management - Space.

PLANT 26: Anthony Favale, Nuclear & Radiation Physics.

PLANT 28: Paul R. Schatzel, Personnel Administration.

PLANT 30: Ronald A. Collins, Requirements Planning; Richard A. Burrell, Product Support Site Supply; Bernard F. Lang, Materials Accounting; Angelista R. Gluck, Digital Computer Keypunch.

PLANT 34: Kenneth Skoglind, Product Support Business Controls; Eugene Walkowiak, Product Support Servo Engineering & Training Development; Arthur W. Wiegand, Contracts - A/C.

PLANT 35: Robert L. Erath, Systems Research; Albert J. Gagliano, Quality Control Systems & Procedures.

PLANT 36: John H. King, Plant Management & Staff; Vincent F. Scobbo, Shipping & Spares Consolidation; Savino C. Albanese, Power Plant Design.

PLANT 37: John R. Traina, Router & Shear; Alfons R. Kroll, Maintenance Repair Operation Supply.

PLANT 41: Edward W. Nixon, Structural Designers.

PLANT 77: James J. Dowling Jr., Inspection Quality Control.

PLANT 89: Bartholemew V. Glowacki Jr., Quality Control Supplier.

Just for the record . . .

C. H. Gregory, Maint. Admin. — E. M. Kuhne, Templates — H. M. Yager, Transportation

It probably came as quite a surprise to at least three men on the June anniversary roster that they didn't look anything like their pictures . . . and with good reason. The names that appeared under their photos were transposed. So, just for the record, the real Chet Gregory, Ed Kuhne, and Harold Yager appear above.

She pursues . . .

(Continued from page 2)

samples out of the wing tanks. Certain bacteria—given the right conditions—feast on the hydrocarbons in fuel. This bacterial growth—usually fungi—can clog fuel lines, filters, and corrode tank linings. "Water in the system starts things growing so preventive maintenance is usually the key to solving the problem."

There was a time, about 15 years ago, when Diane thought she might like to be a concert pianist. Although her enjoyment of music is still strong—she's a classical buff—her first love, science, won out. Now she and her husband, Don, who is president of an electronic executive recruitment firm, spend most of their free time water skiing on the Sound near their Port Washington home. Hitting the ski slopes is another favorite pastime, and if there are a few hours left over, gardening, archaeology (she's been to Mayan ruins in Yucatan and archaeological diggings in Israel), technical journals, and the Sunday Times fill in the gaps.

In the future, it's more than likely that the Bio-Technology Department, which is headed by Klaus Feindler, will be moving into such civil systems areas as pollution control, water reclamation, and integrated community waste management.

As Diane sees it: "We're going to have to go to alternative methods. **We have to.** We're running out of resources."

GAA vacation plans

A new kind of vacation—a relax-on-the-beach kind of holiday—is being planned by the Grumman Athletic Association for over the long Thanksgiving weekend. More details will be available for the next issue of Plane News; watch for word on a flight to Eleuthera in the Bahamas. Sign-up date has not yet been set.

Tuesday, July 14, is sign-up day for a trip to Elbow Beach Surf Club in Paget, Bermuda. This will use two vacation days, leaving Tuesday, November 24, and returning on Sunday, November 29. It's a Pan American flight and the cost for a five-day holiday is $230 per person, in twin-bedded room. Guests of Grumman personnel may go if space is available.

Full payment is required at time of signing, with attendance in person required. Checks should be made payable to Bethpage Aircraft Tour Club. (The cost is up $3 because of the new air fare tax.) Be on hand at 5:30 p.m., July 14, in Plant 28.

The package trip includes round-trip jet, non-charter, double occupancy room, breakfast and dinner each day, transfers between airport and hotel, and gratuities. Passports and vaccination certificates are not required.

For further details, call GAA, Ext. 2133 or 2269.

Grumman Campers hit the road, find fun, adventure along the way

People are doing their "thing" in many shapes and forms now. No longer are they content in a spectator role. They participate, hit the highways and byways, and in many ways turn America into a vast playground.

One of these fun groups is the Grumman Family Campers, a club affiliated with the GAA. They're unique in that they turn almost every weekend into a holiday picnic, mixing travel, sightseeing, entertainment, games, and the great outdoors into the melting pot for a "grand old time."

According to Campers' president Phil Giacini of Engineering Systems Analysis, Plant 7, Calverton, the club has a membership of about 75 Grumman families, and all own either travel trailers, tent trailers, or tents; and they plan about a dozen outings each year. Early in April they gathered at Calverton with about 150 people from 27 families. In mid-May they were at Jamesburg, N. J., camp grounds, and later at Honesdale, Pa., where they held a joint weekend with the Empire State Travel Club, a group basically from Long Island.

Fun for all

"Our program has been tremendously popular," Giacini said, "and more and more people have joined these camping clubs. It's great fun for the families, particularly the children, for whom we plan special games with prizes every Saturday morning on our outings.

"Every Friday night as the groups arrive, there is coffee and cake, Saturday morning is for the youngsters, and Saturday afternoons we often plan sightseeing trips to points of interest near the camping grounds. In the evenings, we have pot-luck dinners with huge cookouts, entertainment with games and performers with guitars and accordions, group singing. At many of the camp sites they have callers for square dancing.

"All the camp sites we visit," Giacini assured prospective members, "are the most modern type, with top sanitary conditions, washers and dryers available, electrical hookups, picnic tables, and many have pools or lakes nearby."

On the docket

Some of the events still to come up on the Campers' calendar are Neversink in the Catskills, July 24-25-26; another junket into the Catskills, August 14-15-16; a stay over the long Labor Day weekend, September 3-4-5-6, at Cherry Ridge, Pa., just 20 miles east of Lancaster; and a visit to Danbury, September 25-26-27, when the members can visit Connecticut's most noted fair.

The Grumman families will be at Calverton again October 16-17-18, and then the club has planned the annual "Winter Special" for November 6-7-8 at Liberty, N.Y., for all the members who want to hunt.

"On at least one of our outings," Giacini continued, "we have what we call a 'Monte Carlo night,' when we have games and contests, awarding fake paper money. The people who have collected the most 'prize money' get their pick of door prizes. We have something going on all the time—bonfires every night . . . just the companionship and get-togethers are worth every bit of effort. It's just plain, good, clean fun . . . for all the family."

The club does keep together during the winter months. From November through April there are business meetings on the first Sunday of each month in Plant 18.

This is the Campers' 11th year during which membership has grown steadily. Giacini, who may be contacted on Ext. (57) 247 at Calverton has been president since last November. Currently, Al Ellensohn of Plant 33 is vice president and Herman Heinlein of Plant 4 is treasurer.

"It's very inexpensive," Giacini stressed. "Family membership dues are only $5 a year, with an extra $3 added during the first year for decals, patches, badges, and other miscellaneous expenses. We also support the preservation of camping grounds and have representation on the Suffolk-Nassau Outdoor Recreational Camping Committee. On June 11," he added, "we showed films and gave talks on camping at the Half Hollow Hills Library, and we definitely support conservation and ecology programs.

"For the fun we have," Giacini said, "this can't be beat. Normally, the space rental and services at the camping grounds run about $3.50 per day for each trailer, which is $10.50 a weekend. We usually ask an extra $3 a family to provide coffee and cake on Friday nights and to purchase prizes for the children's games."

That's what you call driving for a big bargain.

Camping chore. **Earl Schroeder (L) and Lou Calsetta of the Grumman Family Campers set up a sun canopy for their camping trailer as they start one of their club's fun weekends. Assisting is Mrs. Mickey Calsetta.**

We get letters . . .

To the editor:

Between March 1964 and September 1965, I collected over 4,000 signatures on petitions to have new quarters struck in honor of General Douglas MacArthur; on September 9, 1965, Congressman John Wydler introduced same to Congressional Record on the floor of Congress.

The bill was never brought to a vote, but on June 15, 1970, over six years after the passing of a great American, the Postmaster General authorized a commemorative postage stamp.

A copy is enclosed of telegram received from Congressman Wydler.

Sincerely,

Stewart (Tony) Smith
Corporate Audit Staff
Plant 30

Stewart A. Smith
Have just been advised by Postmaster General that he has authorized commemorative postage stamp honoring Douglas A. MacArthur. Congratulations to you.

John A. Wydler
Member of Congress

Gophers, golfers keep on rolling

The Grumman Gophers have added another big trinket to their collection, winning the High Industrial Plaque in the 17th annual New York Gallery Rifle Tourney sponsored by the U.S. Merchant Marine Academy at Kings Point.

Grumman outclassed six other industrial teams in the field with a score of 1534 out of a possible 1600. The Gophers finished fourth in the 46-team open shooting as Roslyn won the title.

Hank Womble paced Grumman with a sparkling 396 out of 400, shooting 99 prone, 100 sitting, 99 kneeling, and 98 standing. George Hilton fired 388, Al Burns 381, and Dick Imgram 378. Womble's 396 gave him the fourth-place medal in the top Masters class, while Burns and Cliff Wright both earned two medals in the Expert division in the competition.

Grumman's varsity golfers teed up for their third straight L.I. Industrial League victory by overwhelming Photo Circuits, 8-0, at Bethpage State Park.

Winners were Tony Cisco and Bob Holsten in the first foursome, followed by Jim Alverson and Ken Cunningham. Both duos swept four points, while Cisco supplied the feature with par golf over the Black course.

Shad tourney

Bob Long, Joe Cascio, and Bill Wiederkehr, winners in the shad fishing tournament at Plant 56, Glen Arm, Md., were presented trophies by General Manager George Kaye.

Kickers on vacation after Lab squeaker

There's no more kicking now until late August.

That's when the Grumman soccer squad starts practicing again, and when Scotty Mayors' boys again hope for more success.

A combined team of Grumman Premier and Reserve players closed out the season with a combined picnic-soccer game at the Brookhaven Lab, and as it turned out, it wasn't easy pickin's for either bunch.

Brookhaven won, 4-3, as Grumman was hampered by lack of manpower, but the Lab boys had to stall off a Grumman rally to pick up the sweets. Brookhaven started fast with a 2-0 lead before Alan Grillo scored on a pass from John Castle before the half. In the second half, the Lab again booted two goals past Karl Herrnkind before Grumman started to click. Grumman closed the gap on a tally by Grillo from a scramble, and a direct free kick by Castle before time ran out.

And so, off to the beach.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

RUSSELL J. ROE of Quality Control, Plant 83, KSC, died June 25 at the age of 48. He had been with the Company since 1963, and he lived at 1418 Ransom Dr., Titusville, Fla.

RONALD D. GAINES died June 27 at the age of 28. He had been with the Company since 1965, and he worked in Fuselage Sub-Assembly, Plant 27. His home was at 235 Parkway Blvd., Wyandanch.

RICHARD HILL of S/CAT Management & Staff, Plant 39, died July 6 at the age of 37. He lived at 4 Matthew St., Huntington Station, and he had completed six years with the Company.

Net team aiming for 8th consecutive L.I. title

Grumman's varsity netmen have latched on to another string in the L.I. Industrial League that is expected to pull them to their eighth straight title.

Coach Mitch Rosenbaum has a "front-line" force of 19 players, including 15 veterans of past seasons and newcomers Don Bohling, Dick Reade, Charles Kirbow, and Tom Guarino.

The veteran lineup is headed by Captain Fred Hermann, who was undefeated in the doubles league play last season with Bill Wenzel as a partner. Others returning for another shot at the title are Grant Hedrick, Neil Pike, Dick Kline, Jacques Crouzet-Pascal, Jay Leng, Tom Adee, Al Ghoreyeb, John Hsu, Wing Lee, Dave McKendrick, Neville Milford, John Penn, and Val Kirillin.

Grumman picked up right where it left off last season by scoring impressively in its first two matches. It first beat LILCO, 5-0, with Hermann and Wenzel winning, 6-1, 6-3; Pike and Lee by 6-3, 6-4, Ghoreyeb and McKendrick, 6-3, 5-7, 6-1; Kirillin and Guarino by 6-0, 6-0; and Rosenbaum filled in with Penn as they won, 6-1, 6-3.

The Grumman squad then beat one of its strong rivals, outscoring Sperry by 4-1, losing that one match on a "forfeit" when Bohling pulled a tendon while playing with Reed.

Hermann and Wenzel scored an impressive victory in the No. 1 match, beating Sperry's Jerry Porter and Norm Palter 6-3, 4-6, 6-2. Pike and Hsu scored 6-1, 6-4; Pascal and Lenz rallied to win 6-8, 6-1, 6-2, and Kirillin and Guarino scored 6-0, 6-3.

Besides LILCO and Sperry, other teams in the Industrial League are Photo Circuits, Pan Am, Republic, Pfizer, and Hazeltine.

Fred Hermann
Elected varsity net captain

Grumman is playing its home matches this season at Long's Tennis Club on Brookside Avenue, Freeport.

Once again!

Sorry, there are no more tickets available for "Grumman Night" at Shea Stadium on Friday, July 24. Close to 1,000 tickets went for the Mets-Los Angeles game as quick as you could say "Jack Robinson."

But there are some tickets for the second trip on Friday night, August 21, when Gil Hodges' boys meet the Cincinnati Reds. They are priced at $2.75 each for seats in sections 3-5-7 on the mezzanine. Bus transportation is also available at a cost of $1.25.

Want to root home the Mets? Better hurry—the ducats may be secured from the GAA in Plant 28B, extensions 2269 and 2133.

Domes' lone single cancels Dvoskin's ticket to slow-pitch fame

Norm Dvoskin of unbeaten Research had a "near miss" while shooting for one of sports' rarest feats—a no-hitter in slow-pitch softball.

Tossing against the Domes in a Grumman twilight league duel, Dvoskin hurled a shutout and allowed only one hit in a 5-0 Research victory that kept his team on top of the American division in the Monday circuit. Dvoskin had a no-hitter going for 5 2/3 innings before his bid exploded. He received sharp defensive help, while Joe Miller led Research's attack with three hits.

Two other shutouts were reported in the twilight circuit, with the spotlight also turning on Fred Kolb of the J-Mets and Len Luke of the Sloe Pokes.

Kolb was nearly as effective as Dvoskin; he allowed only two hits in spinning the J-Mets to a 4-0 victory over the Wiffles in the Thursday night circuit. Frank Varipapa led the J-Mets with three-for-three.

Luke flips shutout

Luke effectively scattered seven hits as the Sloe Pokes trounced the CBA All Stars, 9-0, in a Wednesday American game. Pat Garahan and Neil Mark socked homers, but it was a tremendous catch by Mark in right field that was turned into a double play that saved Luke's shutout.

Tom Cobey turned in a mound sparkler in the Thursday loop, scattering four singles as the Rangers beat Research 7-3, with Don Lundergan and Al Beck socking homers.

The Tigers won a sizzler in the Tuesday American loop, edging the Dacs, 12-10, in nine innings. The Dacs sent the game into extra innings with five runs in the bottom of the seventh, and had Larry Schwartzwalder hitting a grand-slammer. Bill Foote and Dick Crispo belted four hits each for the Tigers.

Marauders get 38 hits

In the Wednesday American loop, the Marauders practically wore ruts in the base paths as they bombed 38 hits and raced to a 40-15 victory over the Heroes. Don Aleksejus of the Heroes rapped a grand-slam. Don Moncrieff hit two homers for the Marauders, who also had Bob Spina, Ed Krol, Jay Witte, and Al Bauer going the circuit route. Mel Knopf had five-for-five in the romp.

Terry Fisher paced the Bay Guys to a 14-11 win in the Tuesday American league, hitting a triple and homer and getting five RBI's, while Bill Sheridan had six RBI's and Bruce Bandini went four-for-five.

Dick Truan's big bat led the Druids to a 14-4 win over the Hawkeyes. He slapped three homers and a single in the Druids' 19-hit attack. The Druids also beat the Monopoles in a Monday American game, winning 6-2 behind Jim Dimitry as Al Beck rapped out a big homer.

Melchers stops Ducks

The Vikings beat the Ducks, 8-7, in eight innings as Dick Melchers pitched no-hit ball over the last four frames and Ray Manzo rapped three hits, including a homer . . . Bob Schmitt and Les Spence each had three hits as the R-Cees defeated the Duffers, 10-4 . . . Tom Stiles' three bingles and Jim Dimitry's effective chucking gave Simulation an 8-1 decision over the Mets . . . Al Lih's triple featured a six-run sixth that gave the Road Runners a 10-7 win over the Monopoles . . . Al Wallace hit a homer while pitching a four-hitter in the Rangers' 13-3 romp over the No Accounts in a Thursday duel, while Al Beck and Jim Foote each had three hits . . . Mike Gurello socked five hits to pace the Hi-Balls to a 20-13 victory over the CBA Stars . . . Homers by Bill Dargis and George Gilmartin and perfect nights at the plate by Harvey Fromer and Bill Foote led the Tactical Jammers to a 16-1 decision over the Black Diamonds. Fromer was also the hill winner . . . The Jammers also beat the J-Mets as Carmine Stelleto sliced out five hits, including a home run.

Lauro hitting star

The Hi-Balls' five run rally in the bottom of the seventh just failed as they were nipped by the Marauders, 10-9. John Lauro of the Hi-Balls was the big gun with three hits, including a triple, while Dick Lasalla supplied a homer . . . Bob Verzera and Jack Ferrante hit hard as the Titans whipped the Dacs, 9-5 . . . Harry Stuckey came up with the clutch hits as the Campbell Kids, featuring five in the sixth, clouted the Aquarians, 10-5. . . . Both clubs got 20 hits as the J-Mets nipped the Side Lobes, 13-11. Mike Anglim of the J-Mets had three hits . . . The Reds rapped the Hits, 10-3, with Chuck Hess and John Barnes leading the attack, and Bill Masone, Lou Failla and Cleveland Jones starring defensively.

Bill Aguirre's sparkling one-hit pitching featured lunch-hour softball action. Aguirre turned the trick as the Gnomes beat LM Stock, 5-1, in the Plant 2 circuit. That one hit allowed by Aguirre was a solo homer by Jerry Husty in the second inning. Aguirre also helped his own cause with a two-run triple in the third.

At Plant 3, Ed Haab socked a three-run homer with two out in the bottom of the sixth to lift the Jets to a 6-5 victory over the Jokers. It was the Jets' fifth victory against one loss and a tie.

Pete Bitter also socked a homer for the Jets, while Joe Cavola cracked a grand slammer for the Jokers.

The Metsfits pulled a sizzler out of the fire in the final frame at Plant 7, coming from behind with four runs and a 7-6 win over the Bombers. With two out Pete Moore drove in the tying run and then Ben Brunskill chased home the decider. Harry Breese socked a homer for the Metsfits.

In an earlier game at Plant 2, the Avengers won a 11-10 thriller from LM Stock, coming from behind on Harold Brower's sixth-inning triple.

Moore has six RBI's

The following week Pete Moore came back again to star at Calverton as the Metsfits rocked the Oldtimers, 16-2. Moore had three hits in four trips, including two circuits, and finished the day with six RBI's. Pete Tummillo also socked a homer and Harry Breese tripled as Chuck Darling blanked the Oldtimers in all but the second.

In their next game, however, the Metsfits were hard-pressed to skip by the Whats Left club, 9-7, picking up eight runs in the first two frames and then being tamed until a one-run sixth inning homer by George Styles. Mike Wegler, Van Westfall, and George Mathews swung heavy bats in this 14-hit victory.

At Plant 1, Stan Musinski outpitched Tom Trifaro as the Misfits squeezed past the Invaders, 6-4. The only extra-base blow was a homer by the Invaders' Frank Leach. It was the Misfits' third victory against one loss and a tie.

Miglio, Herzberg tee winners

Bella Miglio and Jim Herzberg were the winners of the Mixed Pinehurst golf tourney staged at Bethpage by the GAA, taking first place on a matching of cards after three teams tied at the end of regulation play.

Miglio and Herzberg carded 47, along with the teams of Ben Czizik-Bertha Siegl, and Eileen Toomey-Bill Suppa. Miglio and Herzberg won on the match of cards with a four on the first hole.

The second Mixed Pinehurst will be staged at Bethpage on Wednesday, July 22. Entries are now being accepted by Mike Cherry at the GAA, Plant 28B. The entry fee is $3.50 per player, and tee time again will be between 4:30 and 5:30 p.m.

The Fall Kickers has been scheduled for Tuesday, August 11.

Got troubles—forget 'em—at the big family picnic July 18

We've just had our "long weekend" over the Fourth. Now it's time for the "big weekend." And Saturday, July 18, is that day for gaiety and fun. It will be an extravaganza of food and festivity, when thousands of Grumman families ramble into Calverton for the annual Company picnic.

This is the biggest backyard cookout you may ever see . . . and it's all embellished by a stage show, games, amusement rides and an aura of conviviality that warms the entire area.

From the time the gates open at 8 a.m. to the closing ceremonies at 4:45 p.m., it's go-go-go, especially for the youngsters. There are potato sack, wheelbarrow, three-legged, and shoe races for youngsters in all age groups starting at 10:30 a.m., and a rib-tickling stage show slated at 1 p.m.

Tickets for this summer festival will be on sale at all Employee Services offices through Friday, July 17; there will be no tickets sold at the gate. Tickets are priced at $2 each, with children under 12 admitted free. Participation in this carnival, however, is limited to Grumman employees and members of their families living in the same household. Single employees are permitted to have a boy friend or girl friend as their guests.

On your mark!

8 a.m.—Gates open.
10 a.m.—Flag-raising ceremonies.
10:30 a.m. to 12:45 p.m.—Band concert, dance music.
1 p.m. — Children's entertainment (stage show).
2 p.m.—Performance by Huntington Thunderers, Grand National Musical Corps champions.
2:15 p.m. to 4:45 p.m.—Dance music.
2:30 p.m.—Junior Gloves boxing.
2:30 p.m.—Prize drawing.
4:45 p.m.—Closing ceremonies.

Go the L.I.E. way

Picnic-goers from the mid-island or south shore areas should make note this year that the Long Island Expressway is now open all the way to Calverton. Take the L.I.E. to Exit 69, Wading River Road, Wading River, go north to Jericho Turnpike (Route 25), then east ¼ mile to the picnic grounds' entrance. The other two exits recently opened are 70, Eastport Manor Road, Manorville; and 71, Edwards Avenue, Calverton.

There will be a couple of thousand picnic tables splashed around the huge picnic area, with plenty of shade trees. Many people have made a habit of being there early and having a grill-cooked breakfast. As for food, there are many hot dog and refreshment stands coloring the landscape—soda, milk, beer—it's all free. But don't forget the pitchers. The refreshments are dispensed only in paper cups unless you bring your own containers.

Although there are usually many arriving early on the scene, the official program doesn't get underway until the traditional flag-raising ceremonies at 10 a.m. From then on its "off to the races." Children's contests start at 10:30 a.m. on the big playing field north of the amusement area—and there will be a stack of prizes THAT high. Contests for adults that follow will include a potato sack race for women, fat men's race, three-legged event, cigar relay, wheelbarrow race, egg tossing, and a softball throwing event for women.

There will be a band concert and dance music throughout the day. The tunes of the Grumman Employees Band under the direction of Al Kordula, will be mingled with the vocalizing of Tony Vaccaro and Harry Hess and the rock 'n' roll music of the Intruders, a Grumman group including John Rohback, John Davis, Bob Swenson, and Mike Furr. The strolling Grumman Yankee Clippers will again be serenading picnickers around the grounds. Dressed in the style of the Gay 90's will be Chet Parsons, Herman Zwick, Don Getrost, and Chuck Wells.

Five-star stage show

Picnic Maestro Gus D'Errico has another five-star entertainment show scheduled for 1 p.m. These acts are headed by Pepe, "straight" from Disneyland and top notices in the Hollywood Reporter and Variety. Pepe will supply the laughs and emcee the show. The lineup includes Vic Dexter, the "Gentleman Juggler"; Miriam France, who does aerial spectaculars 75 feet up in the sky; Miss Ava, an acrobatic trapeze star; and Korengo, an illusionist and master of magic.

Ah, then come the Huntington Thunderers, Juniors and Seniors, and winners of the Grand National Musical Corps championship last year in Houston. The Thunderers have appeared in almost every one of New York City's major parades. In their spectacular performance they offer the "Now" sound of music with intricate marching maneuvers, twirlers, and even a jazz-oriented ballet.

Junior Glovers, too

One of the big attractions over the years has been the Junior Glovers, and Johnny Koloski has been busy pairing youngsters up to 12 for a little "breeze" work. Nobody has ever been hurt in these bouts—utmost care is taken—so it's one of the most hilarious shows of the carnival, especially when the "peanut weights" try to swing the one-pound mitts.

Meanwhile, the free amusement rides will keep whirling away. There's the Octopus, carousel, Ferris wheel, fire engine ride, a couple of boat rides—both waterborne and landlocked—and two gasoline-powered trains will toot and toddle around tree-lined routes all through the day.

Last year, it was estimated that up to 30,000 people made the scene. None were disappointed.

In addition to all this activity, there will be a drawing for about 100 door prizes, starting at 2:30 p.m., so don't forget to hold on to your ticket stubs.

The grand prize winner will have a pick of one of nine GE items, including a 13-cubic-foot refrigerator; 13-cubic-foot freezer; 23-inch console TV; portable automatic dishwasher; air conditioner (6000 BTU's); hi-fi-stereo with AM and FM radio; portable color TV set; 16-pound automatic washer; or a 16-pound dryer.

Good luck. See you at eight on the 18th!

Just in case . . .

It's something of a tradition that it never rains on the day of the Grumman Family Outing (it's been broken once or twice). But if it does this year on picnic day (Saturday, July 18), the carnival will be rescheduled for Sunday, July 19.

Any postponement will be announced early on Saturday over the following Long Island radio stations:

WLIR, Garden City (FM 92.7); WGBB, Freeport (AM 1240); WHLI, Hempstead (AM 1100); WBAB, Babylon (AM 1440, FM 102.3); WALK, Patchogue (AM 1370, FM-97.5); WGSM, Huntington (AM-740); WLNG, Sag Harbor (AM-1600).

A quick check may also be made by telephone. Information will be available by dialing LR 5-5111 in Bethpage, or PA 7-1504 in Calverton.